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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,037	10/23/2003	Nitin Jain	FOUND-0068 (034103-026)	3914

49680 7590 11/12/2008

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EXAMINER	
HALIYUR, VENKATESH N	
ART UNIT	PAPER NUMBER
2419	
MAIL DATE	DELIVERY MODE
11/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/693,037	JAIN ET AL.	
	Examiner	Art Unit	
	VENKATESH HALIYUR	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-60* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-9,11-16,18-20,22-24,26-28,30-34,36-42,44-49,51-53 and 55-60* is/are rejected.

7)☒ Claim(s) *2,10,17,21,25,29,35,43,50 and 54* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on 07/17/2008 is sufficient to overcome Kadambi et al and Erimli et al reference. However the amendment necessitated new ground(s) of rejection using Kadambi et al, Erimli et al and a newly found Liu et al reference.

2. Claims 1-60 is pending in the application.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The claimed invention in claims 57-60 is directed to non-statutory subject matter.

In these claims, lines 1-2, the limitation is recited as "A program storage device readable by a machine, tangibly embodying a program of instructions by the machine to perform a ....." which does not comply with the 101 interim guidelines set forth therein (please refer to pages 52-53 of the 101 interim guidelines). It is well established that a computer program product or a software product or computer readable code, per se is not a physical "thing" and does not define any structural and functional interrelationship between the computer

program code and the rest of the computer, which permits the computer program's functionality to be realized. In order for a computer program or software instructions to be statutory it must be embodied (encoded) in a computer-readable medium capable of being executed by a computer.

Thus, claims 57-60 are directed to non-statutory subject matter since the patent protection sought by the claimed invention is for the computer program in the abstract.

Appropriate corrections are required to these claims without introducing any new matter to the disclosure.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3-9, 11-15,33-34,36-42,44-48,57-58, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kadambi et al [US Pat: 7,212,534] and Erimli et al further in view of Liu et al[US Pat: 7,292,572].

Regarding claims 1,34, Kadambi et al in the invention of "Flow Based Congestion Control" disclosed a method **(Figs 10 to 17)** comprising: determining a present need to pause traffic to a network device; and responsive to the determining, placing in a

type/length field in a frame, a value signifying that the frame indicates that traffic flow to the network device should be paused **(LENGTH/TYPE Field of Fig 17, col 15, lines 11-23)**; placing in an opcode field in the frame, a value signifying that traffic flow to the network device should be paused or not paused according to its priority level **(col 15, lines 24-59)**; creating a priority mask field in the frame **(OPCODE 1_3 field of Fig 16)**; and placing in the priority mask field, a value signifying which priority levels should be paused **(PRIORITY _BITMAP field of Fig 16, col 14, lines 41-46)**. Kadambi et al disclosed that the traffic flow to the network device should be paused for a specified period of time when the priority indication in the frame type/length field indicates a pause operation **(col 15, lines 11-23)**, but fails to positively disclose placing in the priority mask field, a value signifying which priority levels should be paused. However, Erimli et al disclosed a method for placing priority value signifying which priority levels should be paused in the type/length field **(low and high priority values to control the traffic to the station, col 13, lines 5-40, Fig 5A/B).** Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of placing priority value signifying which priority levels should be paused in the type/length field as taught by Erimli et al in the system of Kadambi et al to create a priority mask field in the frame and placing in the priority mask field, a value signifying which priority levels should be paused.

Kadambi and Erimli et al disclosed the traffic flow control using pause frame but fails to positively disclose a method to create a priority mask field in the pause frame. However, Liu et al disclosed a method of generating and identifying mask field in the

pause frame using mask registers **(mask fields, Figs 1 & 9, col 3, lines 27-54, col 6, lines 64-67,col 7, lines 1-23).** Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of generating mask field in the pause frame as taught by Liu et al in the system of Kadambi et al as modified by Erimli et al to create a priority mask field in the frame to signify whether a data stream of a particular priority should be paused or not. One is motivated as such in order to provide a dynamic traffic flow control in the network device by either pausing or allowing a data stream of certain priority level indicated in the opcode field of the pause frame.

Regarding claim 3, 36,Kadambi et al disclosed wherein the placing in an opcode field in the frame includes placing a value signifying that traffic flow to the network device should be paused or not paused according to its priority level **(inhibit or allow transmission of frames, col 15, lines 19-35)**, and that the pausing will be for times corresponding to each priority level indicated by a pause time field, in an opcode field in the frame if it is not desired to use the same pause time for each priority level **(col 3, lines 41-52).**

Regarding claim 4, 37 Kadambi et al disclosed placing a separate value for each possible priority level in the pause time field, said separate value indicating an independent pause time for each corresponding priority level **(Figs 14/15, col 13, lines 8-30)**.

Regarding claims 5-6,38-39 wherein the pause time field is equal in size to the pause time field in a standard PAUSE frame multiplied by the number of possible priority levels and wherein the frame is a PAUSE frame **(col 9, lines 32-39).**

Regarding claim 7, 40, Kadambi et al disclosed wherein the value signifying that the frame indicates that traffic flow to the network device should be paused is identical to values used to indicate standard PAUSE frames **(col1 15, lines 11-20).**

Regarding claim 8, 41 Kadambi et al disclosed wherein the value signifying that traffic flow to the network device should be paused or not paused according to its priority level is a value not used by standard PAUSE frames in said opcode field **(col 15, lines 60-67)**.

Regarding claim 9, 42, Kadambi et al disclosed a method **(Figs 10 to 17)** comprising: determining a present need to pause traffic to a network device; and responsive to the determining, placing in a type/length field in a frame, a value signifying that traffic flow to the network device should be paused or not paused according to its priority level **(LENGTH/TYPE Field of Fig 17, col 15, lines 11-59)**; creating a priority mask field in the frame; and placing in the priority mask field a value signifying which priority levels should be paused **(PRIORITY_BITMAP field of Fig 16, col 14, lines 41-46)**. Kadambi et al disclosed that the traffic flow to the network device should be paused for a specified period of time when the priority indication in the frame type/length field indicates a pause operation **(col 15, lines 11-23)**, but fails to positively disclose placing in the priority mask field, a value signifying which priority levels should be paused. However, Erimli et al disclosed a method for placing priority value signifying which

priority levels should be paused in the type/length field **(low and high priority values to control the traffic to the station, col 13, lines 5-40, Fig 5A/B).** Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of placing priority value signifying which priority levels should be paused in the type/length field as taught by Erimli et al in the system of Kadambi et al to create a priority mask field in the frame and placing in the priority mask field, a value signifying which priority levels should be paused.

Kadambi and Erimli et al disclosed the traffic flow control using pause frame but fails to positively disclose a method to create a priority mask field in the pause frame. However, Liu et al disclosed a method of generating and identifying mask field in the pause frame using mask registers **(mask fields, Figs 1 & 9, col 3, lines 27-54, col 6, lines 64-67, col 7, lines 1-23).** Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of generating mask field in the pause frame as taught by Liu et al in the system of Kadambi et al as modified by Erimli et al to create a priority mask field in the frame to signify whether a data stream of a particular priority should be paused or not. One is motivated as such in order to provide a dynamic traffic flow control in the network device by either pausing or allowing a data stream of certain priority level indicated in the opcode field of the pause frame.

Regarding claim 11, 44, Kadambi et al disclosed placing in an opcode field in the frame, a value signifying that the pausing will be for times corresponding to each priority

level indicated by a pause time field if it is desired to use the same pause time for each priority **(col 3, lines 41-52)**.

Regarding claim 12, 45, Kadambi et al disclosed placing in the pause time field, a separate value for each possible priority level, the separate value indicating an independent pause time for each corresponding priority level **(Figs 14/15, col 13, lines 8-30)**.

Regarding claim 13,46, Kadambi et al disclosed wherein the pause time field is equal in size to the pause time field in a standard PAUSE frame multiplied by the number of possible priorities **(col1 15, lines 11-20)**.

Regarding claims 14-15, 47-48, Kadambi et al disclosed wherein the frame is a PAUSE frame and the value signifying that traffic flow to the network device should be paused or not paused according to its priority level is a value not used by standard PAUSE frames in the type/length field **(LENGTH/TYPE Field of Fig 17, col 9, lines 32-39)**.

Regarding claim 33, Kadambi et al disclosed an apparatus **(Fig 6)** for handling a frame in a network with traffic flow having varying priority levels, the method comprising: a type/length field value examiner configured to examine a value in a type/length field in a frame to determine if it signifies that the frame indicates that traffic flow to a network device should be paused and if it signifies that traffic flow to the network device should be paused or not paused according to its priority level **(col 14, lines 13-15)**; and a priority level traffic flow pauser **(col 14, lines 10-12)** coupled to the type/length field value examiner and configured to pause traffic flow to the network device with priority

levels corresponding to levels signified by a value in a priority mask field in the frame if the value in the type/length field signified that traffic flow to a network device should be paused and that traffic flow to the network device should be paused or not paused according to its priority level **(col 14, lines 23-32)**. Erimli et al disclosed examining an opcode field in the frame to determine if it signifies that traffic flow to the network device should be paused or not paused according to its priority level, but fails to positively disclose a priority mask field in the frame signifying a priority level. However, Liu et al disclosed a method of generating and identifying mask field in the pause frame using mask registers **(mask fields, Figs 1 & 9, col 3, lines 27-54, col 6, lines 64-67,col 7, lines 1-23).** Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of identifying a priority value in the mask field of frame as taught by Liu et al in the system of Erimli et al to identify a priority mask field in the frame to signify whether a data stream of a particular priority should be paused or not. One is motivated as such in order to provide a dynamic traffic flow control in the network device by either pausing or allowing a data stream of certain priority level indicated in the opcode field of the pause frame.

Regarding claims 57,58, Kadambi et al in disclosed a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method **(Figs 10 to 17)** comprising: determining a present need to pause traffic to a network device; and responsive to the determining, placing in a type/length field in a frame, a value signifying that the frame indicates that traffic flow to the network device should be paused **(LENGTH/TYPE Field of Fig 17, col 15, lines**

11-23); placing in an opcode field in the frame, a value signifying that traffic flow to the network device should be paused or not paused according to its priority level **(col 15, lines 24-59)**; creating a priority mask field in the frame **(OPCODE 1_3 field of Fig 16)**; and placing in the priority mask field, a value signifying which priority levels should be paused **(PRIORITY _BITMAP field of Fig 16, col 14, lines 41-46)**. Kadambi et al disclosed that the traffic flow to the network device should be paused for a specified period of time when the priority indication in the frame type/length field indicates a pause operation **(col 15, lines 11-23)**, but fails to positively disclose placing in the priority mask field, a value signifying which priority levels should be paused. However, Erimli et al disclosed a method for placing priority value signifying which priority levels should be paused in the type/length field **(low and high priority values to control the traffic to the station, col 13, lines 5-40, Fig 5A/B).** Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of placing priority value signifying which priority levels should be paused in the type/length field as taught by Erimli et al in the system of Kadambi et al to create a priority mask field in the frame and placing in the priority mask field, a value signifying which priority levels should be paused.

Kadambi and Erimli et al disclosed the traffic flow control using pause frame but fails to positively disclose a method to create a priority mask field in the pause frame. However, Liu et al disclosed a method of generating and identifying mask field in the pause frame using mask registers **(mask fields, Figs 1 & 9, col 3, lines 27-54, col 6, lines 64-67,col 7, lines 1-23).** Therefore it would have been obvious for one of the

ordinary skill in the art at the time the invention was made to use the method of generating mask field in the pause frame as taught by Liu et al in the system of Kadambi et al as modified by Erimli et al to create a priority mask field in the frame to signify whether a data stream of a particular priority should be paused or not. One is motivated as such in order to provide a dynamic traffic flow control in the network device by either pausing or allowing a data stream of certain priority level indicated in the opcode field of the pause frame.

6. Claims 16,18-20,22-24, 26-28,30-32,49,51-53,55-56,59-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erimli et al in view of Liu et al[US Pat: 7,292,572].

Regarding claim 16,32, Erimli et al disclosed a method comprising **(Figs 5A/B)**: examining a value in a type/length field in a frame to determine if it signifies that the frame indicates that traffic flow to a network device should be paused **(delay observed to avoid congestion indicated in type/length field of the PAUSE frame, Fig, 5B, col 12, lines 57-67, col 13, lines 1-9)**; examining a value in an opcode field in the frame to determine if it signifies that traffic flow to the network device should be paused or not paused according to its priority level, if value in said the type/length field signified that the frame indicates that traffic flow to the network device should be paused **(pause interval, Fig 5B, col 13, lines 10-29)**; and pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame if the value in the opcode field signified that traffic flow to the network device

should be paused or not paused according to its priority level and if the value in the type/length field signified that the frame indicates that traffic flow to the network device should be paused **(high and low priority traffic, col 13, lines 30-39)**. Erimli et al disclosed examining an opcode field in the frame to determine if it signifies that traffic flow to the network device should be paused or not paused according to its priority level, but fails to positively disclose a priority mask field in the frame signifying a priority level. However, Liu et al disclosed a method of generating and identifying mask field in the pause frame using mask registers **(mask fields, Figs 1 & 9, col 3, lines 27-54, col 6, lines 64-67,col 7, lines 1-23)**. Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of identifying a priority value in the mask field of frame as taught by Liu et al in the system of Erimli et al to identify a priority mask field in the frame to signify whether a data stream of a particular priority should be paused or not. One is motivated as such in order to provide a dynamic traffic flow control in the network device by either pausing or allowing a data stream of certain priority level indicated in the opcode field of the pause frame.

Regarding claims 18,51, Erimli et al disclosed wherein the examining a value in an opcode field further comprises examining a value in the opcode field to determine if it also signifies that the pausing will be for times corresponding to each priority level indicated by a pause time **(delay observed to avoid congestion indicated in type/length field of the PAUSE frame, col 12, lines 23-37)** and the pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a

priority mask field in the frame for time periods indicated by a times corresponding to each priority level in a pause time field in the frame if the opcode field signifies that the pausing will be for times corresponding to each priority level indicated by a pause time **(pause interval, Fig 5B, col 13, lines 10-39)**. Erimli et al disclosed examining an opcode field in the frame to determine if it signifies that traffic flow to the network device should be paused or not paused according to its priority level, but fails to positively disclose a priority mask field in the frame signifying a priority level. However, Liu et al disclosed a method of generating and identifying mask field in the pause frame using mask registers **(mask fields, Figs 1 & 9, col 3, lines 27-54, col 6, lines 64-67, col 7, lines 1-23).** Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of identifying a priority value in the mask field of frame as taught by Liu et al in the system of Erimli et al to identify a priority mask field in the frame to signify whether a data stream of a particular priority should be paused or not. One is motivated as such in order to provide a dynamic traffic flow control in the network device by either pausing or allowing a data stream of certain priority level indicated in the opcode field of the pause frame.

Regarding claim 19,52, Erimli et al disclosed wherein the times are a separate value for each possible priority level indicating an independent pause time for each corresponding priority level **(col 12, lines 33-39)**.

Regarding claim 20,53,60 Erimli et al disclosed a method comprising **(Figs 5A/B)**: examining a value in a type/length field in a frame to determine if it signifies that the frame indicates that traffic flow to a network device should be paused **(delay**

observed to avoid congestion indicated in type/length field of the PAUSE frame, Fig 5B, col 12, lines 57-67, col 13, lines 1-9) and if it signifies that traffic flow to the network device should be paused or not paused according to its priority level **(low and high priority, col 13, lines 30-39)**; and pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field if the frame if the value in the type/length field signified that traffic flow to a network device should be paused and that traffic flow to the network device should be paused or not paused according to its priority level **(pause interval, Figs 5A/B, col 12, lines 23-37, col 13, lines 10-29)**. Erimli et al disclosed examining an opcode field in the frame to determine if it signifies that traffic flow to the network device should be paused or not paused according to its priority level, but fails to positively disclose a priority mask field in the frame signifying a priority level. However, Liu et al disclosed a method of generating and identifying mask field in the pause frame using mask registers **(mask fields, Figs 1 & 9, col 3, lines 27-54, col 6, lines 64-67, col 7, lines 1-23).** Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of identifying a priority value in the mask field of frame as taught by Liu et al in the system of Erimli et al to identify a priority mask field in the frame to signify whether a data stream of a particular priority should be paused or not. One is motivated as such in order to provide a dynamic traffic flow control in the network device by either pausing or allowing a data stream of certain priority level indicated in the opcode field of the pause frame.

Regarding claim 22,55, Erimli et al disclosed examining a value in the type/length field to determine if it also signifies that the pausing will be for times corresponding to each priority level indicated by a pause time **(delay observed to avoid congestion indicated in type/length field of the PAUSE frame, col 12, lines 23-37)**; and wherein the pausing traffic flow further comprises pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame for time periods indicated by a times corresponding to each priority level in a pause time field in the frame if the type/length field signifies that the pausing will be for times corresponding to each priority level indicated by a pause time **(pause interval, col 13, lines 10-29)**. Erimli et al disclosed examining an opcode field in the frame to determine if it signifies that traffic flow to the network device should be paused or not paused according to its priority level, but fails to positively disclose a priority mask field in the frame signifying a priority level. However, Liu et al disclosed a method of generating and identifying mask field in the pause frame using mask registers **(mask fields, Figs 1 & 9, col 3, lines 27-54, col 6, lines 64-67, col 7, lines 1-23).** Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of identifying a priority value in the mask field of frame as taught by Liu et al in the system of Erimli et al to identify a priority mask field in the frame to signify whether a data stream of a particular priority should be paused or not. One is motivated as such in order to provide a dynamic traffic flow control in the network device by either pausing or allowing a data stream of certain priority level indicated in the opcode field of the pause frame.

Regarding claim 23, 56, Erimli et al disclosed wherein the times are a separate value for each possible priority level indicating an independent pause time for each corresponding priority level **(col 12, lines 33-37)**.

Regarding claim 24, Erimli et al disclosed an apparatus comprising **(Figs 4,5A/B, col 12, lines 57-61)**: a pause traffic flow value-to-type/length field placer configured to, if a present need to pause traffic to a network device is determined, place in a type/length field in a frame, a value signifying the frame indicates that traffic flow to the network device should be paused**(delay observed to avoid congestion indicated in type/length field of the PAUSE frame, Fig 5B, col 12, lines 57-64)**; a priority level based pause traffic flow value-to-opcode field placer coupled to said pause traffic flow value-to-type/length field placer **(pause interval, Fig 5B, col 13, lines 10-39)** and configured to place in an opcode field in the frame, a value signifying that traffic flow to the network device should be paused or not paused according to its priority level; a priority mask field creator coupled to said priority level based pause traffic flow value-to-opcode field placer and configured to create a priority mask in the frame **(high/low priority, col 13, lines 1-9)**; and a paused priority level value-to-priority mask field placer coupled to the priority mask field creator and configured to place in the priority mask field, a value signifying which priority levels should be paused **(registers, col 12, lines 12-56)**. Erimli et al disclosed examining an opcode field in the frame to determine if it signifies that traffic flow to the network device should be paused or not paused according to its priority level, but fails to positively disclose a priority mask field in the frame signifying a priority level. However, Liu et al disclosed a method of generating

and identifying mask field in the pause frame using mask registers **(mask fields, Figs 1 & 9, col 3, lines 27-54, col 6, lines 64-67, col 7, lines 1-23).** Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of identifying a priority value in the mask field of frame as taught by Liu et al in the system of Erimli et al to identify a priority mask field in the frame to signify whether a data stream of a particular priority should be paused or not. One is motivated as such in order to provide a dynamic traffic flow control in the network device by either pausing or allowing a data stream of certain priority level indicated in the opcode field of the pause frame.

Regarding claim 26, Erimli et al disclosed wherein said priority level based pause traffic flow value-to-opcode field placer includes a pause times corresponding to priority level value-to-opcode field placer configured to place a value signifying that traffic flow to the network device should be paused or not paused according to its priority level, and that the pausing will be for times corresponding to each priority level indicated by a pause time field, in an opcode field in the frame if it is not desired to use the same pause time for each priority level **(col 13, lines 10-29)**.

Regarding claim 27, Erimli et al disclosed a priority level separate value-to-pause time field placer coupled to said priority level based pause traffic flow value-to-opcode field placer configured to place a separate value for each possible priority level in the pause time field, the separate value indicating an independent pause time for each corresponding priority level **(col 13, lines 110-15-29)**.

Regarding claim 28, Erimli et al disclosed an apparatus comprising **(Figs 4,5A/B, col 12, lines 57-61)**: a priority level based pause traffic flow value-to-type/length field placer configured to, if a present need to pause traffic to a network device is determined, place in a type/length field in a frame, a value signifying that traffic flow to the network device should be paused or not paused according to its priority level **(col 13, lines 10-39)**; a priority mask field creator coupled to the priority level based pause traffic flow value- to-type/length field placer **(col 13, lines 10-15)** and configured to create a priority mask field in the frame and a paused priority level value-to-priority mask field placer coupled to said priority mask field creator and configured to place in the priority mask field, a value signifying which priority levels should be paused **(Fig 5A, col 12, lines 23-37)**. Erimli et al disclosed examining an opcode field in the frame to determine if it signifies that traffic flow to the network device should be paused or not paused according to its priority level, but fails to positively disclose a priority mask field in the frame signifying a priority level. However, Liu et al disclosed a method of generating and identifying mask field in the pause frame using mask registers **(mask fields, Figs 1 & 9, col 3, lines 27-54, col 6, lines 64-67, col 7, lines 1-23).** Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of identifying a priority value in the mask field of frame as taught by Liu et al in the system of Erimli et al to identify a priority mask field in the frame to signify whether a data stream of a particular priority should be paused or not. One is motivated as such in order to provide a dynamic traffic flow control in the network

device by either pausing or allowing a data stream of certain priority level indicated in the opcode field of the pause frame.

Regarding claim 30, Erimli et al disclosed a pause times corresponding to priority level value-to-opcode field placer coupled to the priority level based pause traffic flow value-to-type/length field placer and configured to place in an opcode field in the frame, a value signifying that the pausing will be for times corresponding to each priority level indicated by a pause time field if it is desired to use the same pause time for each priority **(col 13, lines 16-39)**.

Regarding claim 31, Erimli et al disclosed a priority level separate value-to-pause time field placer coupled to the pause times corresponding to priority level value-to-opcode field placer and configured to place in the pause time field, a separate value for each possible priority level, the separate value indicating an independent pause time for each corresponding priority level **(col 12, lines 15-22)**.

Regarding claims 49,59, Erimli et al disclosed a method comprising **(Figs 5A/B)**: examining a value in a type/length field in a frame to determine if it signifies that the frame indicates that traffic flow to a network device should be paused **(delay observed to avoid congestion indicated in type/length field of the PAUSE frame, Fig 5B, col 12, lines 57-67, col 13, lines 1-9)**; examining a value in an opcode field in the frame to determine if it signifies that traffic flow to the network device should be paused or not paused according to its priority level, if value in said the type/length field signified that the frame indicates that traffic flow to the network device should be paused **(high/low priority, 5B, col 13, lines 10-29)**; and pausing traffic flow to the network

device with priority levels corresponding to levels signified by a value in a priority mask field in the frame if the value in the opcode field signified that traffic flow to the network device should be paused or not paused according to its priority level and if the value in the type/length field signified that the frame indicates that traffic flow to the network device should be paused **(pause intervals, col 13, lines 30-39)**. Erimli et al disclosed examining an opcode field in the frame to determine if it signifies that traffic flow to the network device should be paused or not paused according to its priority level, but fails to positively disclose a priority mask field in the frame signifying a priority level. However, Liu et al disclosed a method of generating and identifying mask field in the pause frame using mask registers **(mask fields, Figs 1 & 9, col 3, lines 27-54, col 6, lines 64-67, col 7, lines 1-23).** Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of identifying a priority value in the mask field of frame as taught by Liu et al in the system of Erimli et al to identify a priority mask field in the frame to signify whether a data stream of a particular priority should be paused or not. One is motivated as such in order to provide a dynamic traffic flow control in the network device by either pausing or allowing a data stream of certain priority level indicated in the opcode field of the pause frame.

Response to Amendment

7. Applicant's argument, see remarks filed on 07/17/2008 with respect to rejection of claims 1-60 have been considered but are moot in view of the new ground(s) of

rejection because the applicant's argument appears to be contrary to the disclosure in the specification of the instant application. In support of this, the examiner respectfully refers applicant's to the disclosures in paragraphs **0023 and 0024** of the specification in instant application, where the claimed invention is supported via a flow diagram **(Figs 6-7)** illustrating a method for generating a frame indicating that traffic flow should be paused to a network device, the traffic flow having varying priority levels where the specification further describes that this may be a value identical to that of standard PAUSE frames, a value signifying that traffic flow should be paused or not paused according to its priority level may be placed in an opcode field in the frame, which broadly reads on the methods taught by the references **(Figs 15-17 of Kadambi and Figs 5A/B of Erimli)** for placing in an *opcode* field in the frame includes placing a value signifying that traffic flow to the network device should be paused or not paused according to its priority level placed in a type/length field in the frame, and that the pausing will be for time indicated by a pause time field in the frame without regard for the priority level, *in an opcodefield* in the PAUSE frame if it is desired to use the same pause time for each priority level that the references fail to teach the limitation of placing in the priority mask field, a value signifying which priority levels should be paused. However, the examiner has indicated allowability (see below) of the subject matter for the limitation of priority mask field value as indicated in Fig 5 of the instant application to signify the priority value in the type/length field which the applicant claim as their invention.

With respect to applicant's argument for claims 1-60 that Kadambi et al fails to positively disclose placing in the priority mask field, a value signifying which priority levels should be paused the examiner agrees as Kadambi et al only disclosed that the traffic flow to the network device should be paused for a specified period of time when the priority indication in the frame type/length field indicates a pause operation (col 15, lines 11-23). However, the examiner has used Erimli and a newly found Liu references to overcome the deficiencies of Kadambi et al as presented in the amended claims for the method of placing priority value signifying which priority levels should be paused in the type/length field (Erimli et al, col 13, lines 5-40, Fig 5A/B) and for placing in the priority mask field, a value signifying which priority levels should be paused (Liu et al). Therefore new ground(s) of rejection has been presented in this office action.

With respect to applicant's argument for rejection of claims 57-60 for non-statutory subject matter under 35 USC 101 requirements because the use of phrase(s) "A program storage device readable by a machine, tangibly embodying a program of instructions by the machine to perform...." in these claims fail to comply with 101 interim guidelines. In this case for example, a machine can be interpreted as any device that can read even a program written on a paper and stored on a storage means and therefore fails to provide structural and functional interrelationship between the computer hardware and the software. The examiner requests applicants to refer to 35 USC 101 interim guidelines (Annex IV, pp 51-54) for further compliance with the guidelines provided for computer readable medium encoded with a computer program which defines structural and functional interrelationships between the computer program

and rest of the computer which permits the computer program's functionality to realized is explained in detail.

Therefore the examiner respectfully suggest that the applicant's modify these claims to read as "A computer program storage device readable by a computer, tangibly embodying a computer program of instructions and said instructions capable of being executed by a computer to perform....." or in similar terms to comply with 101 interim guidelines.

Allowable Subject Matter

8. Claims 2, 10,17,21,25,29,35,43,50,54 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior at fails to teach and render obvious the limitations of 2,10,17,21,25,29,35,43,50,54 for examining a value in an opcode field further comprises examining a value in the opcode field to determine if it also signifies that the pausing will be for time indicated by a pause time field in the frame without regard to priority level and the said pausing traffic flow further comprises pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame for a time period indicated by the pause time field in the frame without regard to priority level if the opcode field signifies that the pausing will be for time indicated by a pause time field in the frame without regard to priority level.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications should be directed to the attention to Venkatesh Haliyur whose phone number is 571-272-8616. The examiner can normally be reached on Monday-Friday from 9:00AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached @ (571)-272-7884. Any inquiry of a general

nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (571)-272-2600 or fax to 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

/Venkatesh Haliyur/
Examiner, Art Unit 2419

/Edan Orgad/
Supervisory Patent Examiner, Art Unit 2419